

Date: Thu, 14 Apr 94 13:58:46 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #416
To: Info-Hams

Info-Hams Digest Thu, 14 Apr 94 Volume 94 : Issue 416

Today's Topics:

 AMSAT HF PBBS MOVE
 Anyone Bicycle Mobile?
 C91J QSL Info
 Daily Summary of Solar Geophysical Activity for 12 April
 Florida west coast repeaters
 FM Broadcast as a freq. ref.
 Green Card Lottery- Final One?
 Ham radio in Germany
 IPS Daily Report - 13 April 94
 Katashi Nose, KH6IJ, 1916-1994
 Need Address of Panavise
 QSL route
 RS Sale on Handhelds ????
 Spatial Polarity ??
 STOP SENDING HAMS ON USENET CRAP !!!

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 14 Apr 94 18:46:12 GMT
From: news-mail-gateway@ucsd.edu
Subject: AMSAT HF PBBS MOVE
To: info-hams@ucsd.edu

SB PBBS@AMSAT \$ARTS-094
AMSAT PBBS MOVE

The AMSAT PBBS will be changing frequency and modes starting April 15th at 1600 UTC. The AMSAT PBBS will be on a Mark frequency of 14.079, that's (14.181.1 AFSK LSB), using the mode Pactor with the callsign WT0N. The new schedule will be as follows: Monday THRU Saturday from 1600 UTC until 2300 UTC on a Mark frequency of 14.079. From 2330 UTC until 0400 UTC on a Mark frequency of 7.073.5 that's (7.075.6 AFSK LSB), using the Mode Pactor. These changes have been made to better serve AMSAT users with better coverage and use of a mode that many of the users have expressed an interest in. If anyone would like to use the Mode G-TOR, please let me know and I can see about setting up a schedule for G-TOR users. Please send any comments or suggestions to one of the following:

INTERNET: BJARTS@STTHOMAS.EDU

PACKET: WT0N@WB0GDB.#STP.MN.USA.NOAM

PACTOR: WT0N

The AMSAT PBBS will have updated Keps and AMSAT BULLETINS, along with SpaceNews and other satellite related items.

73 AND THANKS FOR YOUR TIME AND INTEREST THE AMATEUR SATELLITE PROGRAM
de BJ ARTS WT0N

/EX

Date: 11 Apr 94 10:05:24 EDT
From: ihnp4.ucsd.edu!sdd.hp.com!vixen.cso.uiuc.edu!howland.reston.ans.net!pipex!
sunic!psinnntp!psinnntp!main03!landisj@network.ucsd.edu
Subject: Anyone Bicycle Mobile?
To: info-hams@ucsd.edu

In article <2o7v2p\$irj@tuba.cit.cornell.edu>, jrl2@crux1.cit.cornell.edu (Jeffrey R. Luszcz) writes:

> Hi,
> I just did some bike-mobile operation last tuesday.
> I was only biking about 5 miles but this is what I
> learned. First my setup. I have an old army ledic
> bag that I throw over my shoulder, its strap goes
> crosswise accross my chest. I put my handheld in the
> bag with the antenna sticking out of the top flap but
> tighten the clasps down tight. I have my ht wrapped in a
> canvas holdere inside the bag. I attach a clip speaker
> mike to the shoulder strap and put the volume way up.
> This lets me hear nicely when other people are talking
> and lets me compete with wind noise when I'm talking
> since the mike is close to my mouth.
> I thought about one of those fancy ear mikes but
> decided against it because.

> 1) its too easy to get hit on your bike anyway, so why
> add yet another reason to get distracted
> 2) too much \$\$\$\$
> 3) would probably hurt if the ht fell out or off and the ear thing
> got ripped out.
>
> I have heard that if you connect your ht to your antenna
> with a cable between the antenna and the ht, if it falls
> its easier on the antenna connector, but I haven't tried
> it myself.
>
> I've thought about mounting it on my handle bars but I'm
> worried about vibration...
>
>
> hope this helps.
>
> -Jeff N2TIQ
>

I've been taking an HT along on some mountain bike trips in NE PA. I haven't actually tried to ATB ride and operate though, except some simplex stuff once on smooth back roads in the NJ pine barrens. Maybe when I get a speaker mike I'll give it a try. Should be able to clip it to your helmet chin strap. Ever consider mounting a longer rubber duck on a Blackburn aluminum rear MTB rack? Might be a pretty good ground, at least for UHF. Maybe you could even shock mount the HT on the rack. These racks are very strong, and would provide good impact protection if the radio was centrally mounted. A small sealed 12V gel cell pack on the rack would be nice too! I thought about handlebar mounting. I wouldn't want anything there for some of the endos I take.

73, Joe - AA3GN

--

Joe Landis - System & Network Mgr. - North American Drager Co.
landisj@drager.com | uupsi5!main03!landisj | AA3GN @ WB3JOE

Date: Mon, 11 Apr 1994 12:46:19 GMT
From: sgiblab!swrinde!emory!europa.eng.gtefsd.com!howland.reston.ans.net!EU.net!
relay.puug.pt!news.inesc.pt!animal.inescn.pt!ciup2.ncc.up.pt!news.ci.ua.pt!
etjfonte@ames.arpa
Subject: C91J QSL Info
To: info-hams@ucsd.edu

MIDN Vasily Chistiakov (M970984) (m970984@usna.navy.mil) wrote:

: Does anyone know who the QSL manager for C91J is? Thanks

QSL to W8GIO ... Good DX'ing

73 's de CT1ENQ

Jose' Miguel M.B.Fonte	Universidade de Aveiro - PORTUGAL
	Departamento de Electronica e Telecom.
E-mail : etjfonte@ci.ua.pt	-----
	Ham callsign : CT1ENQ "always QRV"

Date: 14 Apr 94 04:25:51 GMT
From: agate!howland.reston.ans.net!cs.utexas.edu!utnut!utcsri!
newsflash.concordia.ca!canopus.cc.umanitoba.ca!tribune.usask.ca!
kakwa.ucs.ualberta.ca!quartz.ucs.ualberta.ca!alberta!ve6mgs!usenet@.
Subject: Daily Summary of Solar Geophysical Activity for 12 April
To: info-hams@ucsd.edu

DAILY SUMMARY OF SOLAR GEOPHYSICAL ACTIVITY

12 APRIL, 1994

(Based In-Part On SESC Observational Data)

SOLAR AND GEOPHYSICAL ACTIVITY INDICES FOR 12 APRIL, 1994

NOTE: The background x-ray flux was below A1.0 and energetic electrons at greater than 2 MeV continue at high to very high levels.

```

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 102, 04/12/94
10.7 FLUX=073.9  90-AVG=095          SSN=017          BKI=4442 3233  BAI=017
BGND-XRAY=A1.0    FLU1=1.6E+05  FLU10=1.0E+04  PKI=5553 3344  PAI=025
   BOU-DEV=063,061,066,017,021,019,034,031  DEV-AVG=039 NT      SWF=00:000
   XRAY-MAX= B1.1   @ 0508UT    XRAY-MIN= A1.0   @ 2111UT    XRAY-AVG= A3.0
NEUTN-MAX= +003%   @ 1530UT    NEUTN-MIN= -002%   @ 1830UT    NEUTN-AVG= +0.3%
   PCA-MAX= +0.1DB @ 2355UT    PCA-MIN= -0.5DB @ 0115UT    PCA-AVG= -0.0DB
BOUTF-MAX=55364NT @ 0046UT    BOUTF-MIN=55304NT @ 1843UT    BOUTF-AVG=55332NT
GOES7-MAX=P:+000NT@ 0000UT    GOES7-MIN=N:+000NT@ 0000UT    G7-AVG=+076,+000,+000
GOES6-MAX=P:+128NT@ 1755UT    GOES6-MIN=N:-115NT@ 0312UT    G6-AVG=+094,+028,-046

```

FLUXFCST=STD:100,095,090;SESC:100,095,090 BAI/PAI-FCST=020,015,010/020,015,012
KFCST=3344 5333 3344 4332 27DAY-AP=018,032 27DAY-KP=4343 3433 4555 4343
WARNINGS=*GSTRM;*AURMIDWCH
ALERTS=
!!END-DATA!!

NOTE: The Effective Sunspot Number for 11 APR 94 was 15.2.
The Full Kp Indices for 11 APR 94 are: 4+ 6- 6- 5+ 4- 3+ 3+ 4+
The 3-Hr Ap Indices for 11 APR 94 are: 34 62 66 55 25 20 19 35
Greater than 2 MeV Electron Fluence for 12 APR is: 2.3E+09

SYNOPSIS OF ACTIVITY -----

Solar activity continues very low. Region 7700 (N09E20)
is the only spotted region visible.

Solar activity forecast: solar activity is expected to be
very low.

The geomagnetic field varied from quiet to minor storm levels.
The most disturbed periods occurred during local nighttimes.
The greater than 2 MeV electron fluence was at high levels.

Geophysical activity forecast: the geomagnetic field is
expected to be mostly active early, then calm to generally
unsettled conditions by the end of the interval.

Event probabilities 13 apr-15 apr

Class M	01/01/01
Class X	01/01/01
Proton	01/01/01
PCAF	Green

Geomagnetic activity probabilities 13 apr-15 apr

A. Middle Latitudes	
Active	35/30/25
Minor Storm	25/20/10
Major-Severe Storm	10/10/05
B. High Latitudes	
Active	40/30/30
Minor Storm	30/20/20
Major-Severe Storm	15/10/10

HF propagation conditions continued to be well below normal over most regions. High and polar latitudes continue to see periods of poor to very poor propagation. All regions are experiencing depressions in MUF by about 30 to 40 percent. Gradual improvements are expected on 13 or 14 April over the lower latitudes. Higher latitudes will likely require additional days to recover from this disturbance. Recurrent night-sector substorming will continue to produce periods of minor signal degradation over the high and polar latitude circuits.

COPIES OF JOINT USAF/NOAA SESC SOLAR GEOPHYSICAL REPORTS

REGIONS WITH SUNSPOTS. LOCATIONS VALID AT 12/2400Z APRIL

NMBR LOCATION LO AREA Z LL NN MAG TYPE

7700 N08E20 203 0030 CRO 05 007 BETA

REGIONS DUE TO RETURN 13 APRIL TO 15 APRIL

NMBR LAT LO

7696 S16 096

LISTING OF SOLAR ENERGETIC EVENTS FOR 12 APRIL, 1994

BEGIN MAX END RGN LOC XRAY OP 245MHZ 10CM SWEEP

NONE

POSSIBLE CORONAL MASS EJECTION EVENTS FOR 12 APRIL, 1994

BEGIN MAX END LOCATION TYPE SIZE DUR II IV

NO EVENTS OBSERVED

INFERRED CORONAL HOLES. LOCATIONS VALID AT 12/2400Z

ISOLATED HOLES AND POLAR EXTENSIONS

EAST SOUTH WEST NORTH CAR TYPE POL AREA OBSN

75 N22W02 N08W28 N20W30 N26W07 239 ISO NEG 006 10830A

76 N35E88 S30E68 S10E18 N40E88 173 ISO POS 022 10830A

SUMMARY OF FLARE EVENTS FOR THE PREVIOUS UTC DAY

Date Begin Max End Xray Op Region Locn 2695 MHz 8800 MHz 15.4 GHz

11 Apr: 0524 0527 0530 B1.0

REGION FLARE STATISTICS FOR THE PREVIOUS UTC DAY

	C	M	X	S	1	2	3	4	Total	(%)
	--	--	--	--	--	--	--	--	---	-----
Uncorrelated:	0	0	0	0	0	0	0	0	001	(100.0)

Total Events: 001 optical and x-ray.

EVENTS WITH SWEEPS AND/OR OPTICAL PHENOMENA FOR THE LAST UTC DAY

Date	Begin	Max	End	Xray	Op	Region	Locn	Sweeps/Optical Observations
-----	-----	-----	-----	-----	-----	-----	-----	-----

NO EVENTS OBSERVED.

NOTES:

All times are in Universal Time (UT). Characters preceding begin, max, and end times are defined as: B = Before, U = Uncertain, A = After. All times associated with x-ray flares (ex. flares which produce associated x-ray bursts) refer to the begin, max, and end times of the x-rays. Flares which are not associated with x-ray signatures use the optical observations to determine the begin, max, and end times.

Acronyms used to identify sweeps and optical phenomena include:

II	= Type II Sweep Frequency Event
III	= Type III Sweep
IV	= Type IV Sweep
V	= Type V Sweep
Continuum	= Continuum Radio Event
Loop	= Loop Prominence System,
Spray	= Limb Spray,
Surge	= Bright Limb Surge,
EPL	= Eruptive Prominence on the Limb.

** End of Daily Report **

Date: 14 Apr 94 11:31:09 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!usenet.ins.cwru.edu!

magnus.acs.ohio-state.edu!tgwright@ucbvax.berkeley.edu
Subject: Florida west coast repeaters
To: info-hams@ucsd.edu

Can anyone tell me what the PL code is for the Sanibel Island 144 repeater?
Also, what machines are accessible from North Captiva Island with a handheld?

Thanks,
Tom KF8LM

Date: Thu, 14 Apr 1994 01:02:14 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!news.ucdavis.edu!csus.edu!netcom.com!
wa2ise@network.ucsd.edu
Subject: FM Broadcast as a freq. ref.
To: info-hams@ucsd.edu

In article <Co7rLo.5o8@cbnewsm.cb.att.com> hellman@cbnewsm.cb.att.com
(eric.s.hellman) writes:

>I have a stereo rcvr (mainly used as an amp) that displays to 50 KHz.
>It has always been "off" by that much. That is, stations are tuned in for
>best reception when the display reads 50 KHz away from the published freq.
>There's nothing in the service manual that gives an alignment solution.
>The rcvr has a pll ic and a uP control with clock and counter built in.
>

I played with this sort of radio some years ago, and remember that the
PLL circuits would divide down the local oscillator (used to heterodyne
the station's carrier to the IF freq, 10.7MHz) and count out the cycles
of that and use a crystal based osc for the timing reference. The
system would count out X cycles per Y cycles of reference cycles,
Y usually a fixed value, and X would be compared with the expected
value for the frequency in the band you told it to tune to + 10.7
Maybe that reference is off frequency a bit. 50KHz out of 100 MHz is
around what, 500 ppm, crystals should be better than that, but maybe
there is a trimmer cap you can tweak up. Crystal is probably around
4MHz, or some such number.
Hope this helps:wq

Date: Wed, 13 Apr 1994 20:23:31 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!europa.eng.gtefsd.com!
howland.reston.ans.net!cs.utexas.edu!chpc.utexas.edu!news.utdallas.edu!corpgate!
nrtpa038!brtph560!tcain@network.ucsd.edu
Subject: Green Card Lottery- Final One?
To: info-hams@ucsd.edu

In article <FAUNT.94Apr12095919@netcom12.netcom.com> faunt@netcom12.netcom.com
(Doug Faunt N6TQS 510-655-8604) writes:

>Perhaps someone, preferably a lawyer, in Arizona, could drop a copy of
>this message to the local bar association.

why?

--

Tom Cain WB80UE@ko23

tcain@bnr.ca

Date: Tue, 12 Apr 1994 13:42:54 GMT

From: usc!howland.reston.ans.net!pipex!zaphod.crihan.fr!univ-lyon1.fr!
swidir.switch.ch!scsing.switch.ch!news.dfn.de!news.dfn.de!news.uni-bielefeld.de!
news.uni-essen.de!Kite.@@ihnp4.ucsd.edu

Subject: Ham radio in Germany

To: info-hams@ucsd.edu

x3670 (lieser@iccgcc.cs.hh.ab.com) wrote:

: Is the 2-meter band typically the most used band in Europe also
: (particularly Germany)? I know that in Europe it only extends
: from 144-146MHz, while the 70cm band is much wider. I had thoughts
: of taking a small rig while vacationing. Does anyone have any
: experience with this? (I could only hope that I'd pass the test
: and receive my license before September.)

: I've looked on various ftp sites in Finland and Germany and can't
: seem to find much info. Also, we don't get 'de' groups here.

: Thanks,

: Ed Lieser

: Allen-Bradley Co., Cleveland, Ohio

--

Holger Kollmeier, DL 2 YBZ
Universitaet GH Essen, FB 12
D - 45117 Essen

kollme@automat.uni-essen.de
Tel.: [+49] 201 -- 183 -- 2183
Fax: [+49] 201 -- 183 -- 2944

Operator of DL 0 IE (Clubstation University of Essen)

Date: Wed, 13 Apr 1994 23:29:11 GMT

From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!pipex!sunic!
trane.uninett.no!nac.no!ifi.uio.no!wabbit.cc.uow.edu.au!metro!ipso!
rwc@network.ucsd.edu

Subject: IPS Daily Report - 13 April 94

To: info-hams@ucsd.edu

SUBJ: IPS DAILY SOLAR AND GEOPHYSICAL REPORT
ISSUED AT 13/2330Z APRIL 1994 BY IPS RADIO AND SPACE SERVICES
FROM THE REGIONAL WARNING CENTRE (RWC), SYDNEY.
SUMMARY FOR 13 APRIL AND FORECAST UP TO 16 APRIL

IPS Warning 10 was issued on 31 March and is still current.

1A. SOLAR SUMMARY

Activity: very low

Flares: none.

Observed 10.7 cm flux/Equivalent Sunspot Number : 074/011

1B. SOLAR FORECAST

	14 April	15 April	16 April
Activity	Very low	Very low	Very low
Fadeouts	None expected	None expected	None expected

Forecast 10.7 cm flux/Equivalent Sunspot Number : 075/013

1C. SOLAR COMMENT

None.

2A. MAGNETIC SUMMARY

Geomagnetic field at Learmonth: unsettled to active

Estimated Indices :	A	K	Observed A Index 12 April
Learmonth	21	2343 4444	
Fredericksburg	20		23
Planetary	20		25

Observed Kp for 12 April: 5553 3344

2B. MAGNETIC FORECAST

DATE	Ap	CONDITIONS
14 Apr	22	Unsettled to active.
15 Apr	15	Unsettled.
16 Apr	10	Quiet to unsettled.

2C. MAGNETIC COMMENT

None.

3A. GLOBAL HF PROPAGATION SUMMARY

DATE	LATITUDE BAND		
	LOW	MIDDLE	HIGH
13 Apr	normal	fair-normal	poor

PCA Event : None.

3B. GLOBAL HF PROPAGATION FORECAST

DATE	LATITUDE BAND		
	LOW	MIDDLE	HIGH
14 Apr	normal	normal	poor-fair
15 Apr	normal	normal	fair
16 Apr	normal	normal	normal

3C. GLOBAL HF PROPAGATION COMMENT

NONE.

4A. AUSTRALIAN REGION IONOSPHERIC SUMMARY

MUFs at Sydney were depressed 15-30% until 07UT, near normal thereafter.

Observed T index for 13 April: 20

Predicted Monthly T Index for April is 40.

4B. AUSTRALIAN REGION IONOSPHERIC FORECAST

DATE	T-index	MUFs
14 Apr	40	Near predicted monthly values.
15 Apr	40	Near predicted monthly values.
16 Apr	40	Near predicted monthly values.

4C. AUSTRALIAN REGION COMMENT

None.

IPS Regional Warning Centre, Sydney	IPS Radio and Space Services
email: rwc@ips.oz.au fax: +61 2 4148331	PO Box 5606
RWC Duty Forecaster tel: +61 2 4148329	West Chatswood NSW 2057
Recorded Message tel: +61 2 4148330	AUSTRALIA

Date: 14 Apr 94 09:52:53 GMT

From: dog.ee.lbl.gov!agate!usenet.ins.cwru.edu!cleveland.Freenet.Edu!

eq153@ucbvax.berkeley.edu

Subject: Katashi Nose, KH6IJ, 1916-1994

To: info-hams@ucsd.edu

Katashi Nose - The name brings back memories
of a lifetime of ham radio. The first QST

articles of his that I remember were before WW2.
I was a teenager and thought his name was pronounced
like the proboscis on my face. :-)

I never had the pleasure of working him on the air, but
will always remember his articlesw. I , for one, will miss him.

My condolences to his family and friends.
73, Van - W8UOF
wvanhorn@magnus.acs.ohio-state.edu

Date: 13 Apr 1994 20:21:22 GMT
From: lerc.nasa.gov!magnus.acs.ohio-state.edu!slip1-7.acs.ohio-state.edu!
user@purdue.edu
Subject: Need Address of Panavise
To: info-hams@ucsd.edu

Hello,

Could someone who has a catalog or manual handy
give me the address and phone number of the
company that makes the Panavise bench presses,
vises etc.

Thanks,
Ron Long w8gus.

Date: Wed, 13 Apr 94 14:40:00 -0400
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!darwin.sura.net!
hearst.acc.Virginia.EDU!pplace!pete.wildman@network.ucsd.edu
Subject: QSL route
To: info-hams@ucsd.edu

My info for V26AS says qsl via:
Joe
PO Box 1828
St John's, Antigua
West Indies

Good luck
Pete/KR4PU

Date: 14 Apr 94 13:36:02 GMT
From: hp81.prod.aol.net!search01.news.aol.com!not-for-mail@uunet.uu.net
Subject: RS Sale on Handhelds ????
To: info-hams@ucsd.edu

In article <pruitt.766161859@hubcap>, pruitt@hubcap.clemson.edu (Ken Pruitt) writes:

Summarized: Are the 2 mtr and 440 handhelds from Radio Shack any good. He is interested since they are both on sale.

The 2 mtr version has been plagued by problems of low audio. Many have had to be returned and replaced by RS. Not sure if this problem was duplicated with the 440 rig.

But it sounds to me like RS may be getting ready to clear out the inventory and drop those models. Not sure if they will be bringing out a new model or simply getting out of the ham market. I wish RS was more upfront about their plans. Bought one of their Sensation computers and really was burnt when they brought out the new model and didn't support the users of their first system. If I were you I'd stay away from the RS products and buy your handheld from a reputable ham radio manufacturer.

Date: 14 Apr 94 11:48:20 GMT
From: news-mail-gateway@ucsd.edu
Subject: Spatial Polarity ??
To: info-hams@ucsd.edu

In responding to questions about EME programs, Charlie Betz N0AKC, says:
> There is also a new program available from Paul, N1BUG, that also includes
> spatial polarity calculations (not sure if SKYMOON does that or not).

I know polarity comes in positive and negative. How does this affect radio propagation? How is the polarity of space computed?

(Or do you mean polarization? as in antennas and radio waves)

73 de Bob, w3otc@amsat.org

Date: 14 Apr 94 11:42:47 GMT
From: dog.ee.lbl.gov!agate!news.Brown.EDU!noc.near.net!news.delphi.com!
gilbaronw0mn@ucbvax.berkeley.edu
Subject: STOP SENDING HAMS ON USENET CRAP !!!
To: info-hams@ucsd.edu

>gilbaronw@delphi.com (Gilbert Baron) writes:

>

>>Please explain why crossposting does not use more bandwidth. Inquiring minds

>>would like to know. 10k x 2 lists is 20k of data.

>

>Because the article is but one, with a reference to all the other groups

>that may have interest in it. 10k x 1 newsgroup with 3 other newsgroups

I have recieved this explanation a number of times and it is a good thing. Delphi does work that way too. The only problem with delphi is that many are using the same program that I do to give them an offline capability for usenet and the local forums. That program get the news directly from the news data base and it does not do anything to the .newsrsrc file which means mulitple reciept for the users. It also does not permit crossposting and that can mean multiple post although I think few do that. I am trying to get the author to implement crosspost. Perhaps in another version.

Gil Baron, El Baron Rojo, WOMN Rochester,MN

"Bailar es Vivir"

PGP2.3 key at key servers or upon request

End of Info-Hams Digest V94 #416
